



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 02/27/2008  
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Version 1.60

### Section 1 - Product and Company Information

**Product Name** Cesium chloride, 99.9%  
**Product Number** 289329  
**Brand** Aldrich Chemical

**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052

**Emergency Phone:** 314-776-6555

### Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
CESIUM CHLORIDE	7647-17-8	No	231-600-2	

**Formula** CsCl  
**Synonyms** Cesium monochloride, Dicesium dichloride, Tricesium trichloride

### Section 3 - Hazards Identification

#### Emergency Overview

Caution: Avoid contact and inhalation. Target organ(s): Nerves, Heart.

#### HMIS Rating

Health: 1\* Flammability: 0 Reactivity: 1

#### NFPA Rating

Health: 1 Flammability: 0 Reactivity: 1

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

#### Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

#### Inhalation Exposure

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

#### Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

#### Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

### Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

#### Extinguishing Media Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

#### Firefighting

##### Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

##### Specific Hazard(s)

Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

#### Procedure(s) of Personal Precaution(s)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

#### Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

#### Handling

##### User Exposure

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### Storage

##### Suitable

Keep tightly closed.

#### Special Requirements

Hygroscopic.

### Section 8 - Exposure Controls / PPE

#### Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

#### Personal Protective Equipment

##### Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

##### Hand

Protective gloves.

##### Eye

Chemical safety goggles.

**General Hygiene Measures**  
Wash thoroughly after handling.

### Section 9 - Physical/Chemical Properties

<b>Appearance</b>		
<b>Physical State</b>	<b>Color</b>	<b>Form</b>
Solid	Colorless	Crystalline Powder

**Molecular Weight** 168.36 AMU

**pH** 6.0 - 7.5  
**BP/BP Range** 1,303 °C  
**MP/MP Range** 645 °C  
**Freezing Point** N/A  
**Vapor Pressure** N/A  
**Vapor Density** N/A  
**Saturated Vapor Conc.** N/A  
**SG/Density** 3.988 g/cm<sup>3</sup>  
**Bulk Density** N/A  
**Odor Threshold** N/A  
**Volatiles%** 0 %  
**VOC Content** N/A  
**Water Content** N/A  
**Solvent Content** N/A  
**Evaporation Rate** N/A  
**Viscosity** N/A  
**Partition Coefficient** N/A  
**Decomposition Temp.** N/A  
**Flash Point °F** N/A  
**Flash Point °C** N/A

**Explosion Limits** N/A

**Flammability** N/A  
**Autoignition Temp** N/A  
**Solubility**

**Solubility in Water:** Soluble.  
**Other Solvents:** WILL DISSOLVE IN ACOHOL

N/A = not available

### Section 10 - Stability and Reactivity

**Stability**  
**Stable**  
Stable.  
**Conditions to Avoid**  
Moisture.  
**Materials to Avoid**  
Strong oxidizing agents, Strong acids

**Hazardous Decomposition Products**  
**Hazardous Decomposition Products**  
Hydrogen chloride gas

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**Hazardous Polymerization**  
**Hazardous Polymerization**  
Will not occur.

### Section 11 - Toxicological Information

#### Route of Exposure

##### Skin Contact

May cause skin irritation.

##### Skin Absorption

May be harmful if absorbed through the skin.

##### Eye Contact

May cause eye irritation.

##### Inhalation

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

##### Ingestion

May be harmful if swallowed.

#### Target Organ(s) or System(s)

Nerves, Heart.

#### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** FK9625000

#### Toxicity Data

Oral - Rat: 2600 mg/kg (LD50)

Intraperitoneal - Rat: 1500 MG/KG (LD50)

Subcutaneous - Rat: 2590 MG/KG (LD50)

Remarks: Behavioral: Convulsions or effect on seizure threshold.  
Vascular: BP elevation not characterized in autonomic section,  
Kidney, Ureter, Bladder: Proteinuria.

Intravenous - Rat: 1075 MG/KG (LD50)

Remarks: Behavioral: Convulsions or effect on seizure threshold.  
Vascular: BP elevation not characterized in autonomic section,  
Kidney, Ureter, Bladder: Proteinuria.

Oral - Mouse: 2306 mg/kg (LD50)

Intraperitoneal - Mouse: 1460 MG/KG (LD50)

Subcutaneous - Mouse: 2750 MG/KG (LD50)

Remarks: Behavioral: Convulsions or effect on seizure threshold.  
Vascular: BP elevation not characterized in autonomic section,  
Kidney, Ureter, Bladder: Proteinuria.

Intravenous - Mouse: 910 MG/KG (LD50)

#### Chronic Exposure - Mutagen

<u>Species</u>	<u>Dose</u>	<u>Route</u>
Mouse	500 MG/KG	Oral
Mouse	125 MG/KG	Oral

#### Mutation test

Other mutation test systems  
Cytogenetic analysis

#### Chronic Exposure - Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Rat	706 MG/KG	Oral	(1-21D PRE/21D POST)

Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain) Effects on Newborn: Biochemical and metabolic.  
Effects on Newborn: Physical.

Mouse	262 GM/KG	Oral	(1-21D PREG/21D POST)
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Result: Effects on Newborn: Biochemical and metabolic Effects on Newborn: Physical.

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## Section 12 - Ecological Information

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No data available.

### Acute Ecotoxicity Tests

#### Test Type

LC50 Fish

#### Species

Onchorhynchus mykiss (Rainbow trout)

#### Time:

28 h

#### Value:

181,000 mg/l

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## Section 13 - Disposal Considerations

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### Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.  
Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: None

Non-Hazardous for Transport This substance is considered to be nonhazardous for transport.

### IATA

Non-Hazardous for Air Transport Non-hazardous for air transport.

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## Section 15 - Regulatory Information

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### US Classification and Label Text

#### US Statements

Caution: Avoid contact and inhalation. Target organ(s): Nerves, Heart.

### United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

### Canada Regulatory Information

#### WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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## Section 16 - Other Information

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### Disclaimer

For R&D use only. Not for drug, household or other uses.

### Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SigmaAldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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